

Structural Organization In Animals MCQ Question Answer

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Question: 1. The kind of epithelium which forms the inner walls of blood vessels is

- Option A. cuboidal epithelium
- Option B. columnar epithelium
- Option C. ciliated columnar epithelium
- Option D. squamous epithelium

Question: 2. The ciliated columnar epithelial cells in humans occur in

- Option A. Eustachian tube and stomach lining
- Option B. bronchioles and fallopian tubes
- Option C. bile duct and oesophagus
- Option D. fallopian tubes and urethra

Question: 3. Mast cells are associated with

- Option A. exocrine glands
- Option B. endocrine glands
- Option C. areolar connective tissue
- Option D. neural tissue

Question: 4. Epithelial tissue is distinguished from connective tissue, muscular, or nervous tissue by its

- Option A. large extracellular matrix.
- Option B. contractibility.
- Option C. ability to carry action potentials.
- Option D. basement membrane.

Question: 5. Compound squamous epithelium is found in

- Option A. stomach
- Option B. intestine
- Option C. trachea
- Option D. pharynx

Question: 6. General function of gland is to

- Option A. protect the body.
- Option B. control the function of epithelial tissues.
- Option C. produce and secrete specialized compounds to control and maintain different body functions.
- Option D. help to maintain blood pressure and nerve actions.

Question: 7. Which of the following type of cell junction is not found in animal tissues ?

- Option A. Adhering junction
- Option B. Tight junction
- Option C. Gap junction
- Option D. Plasmodesmata

Question: 8. The only type of cell seen in a tendon is

- Option A. muscle fibres
- Option B. reticular cells
- Option C. collagenous cells
- Option D. fibroblasts

Question: 9. The chondrocytes of connective tissue are

- Option A. fibre secreting cells
- Option B. bone forming cells
- Option C. cartilage cells
- Option D. bone eating cells

Question: 10. The shape of a persons ear is due to mainly to

- Option A. dense regular connective tissue
- Option B. dense irregular connective tissue
- Option C. elastic cartilage
- Option D. fibrocartilage

Question: 11. Tendons and ligaments are the examples of

- Option A. areolar connective tissue
- Option B. adipose tissue
- Option C. dense regular connective tissue
- Option D. loose connective tissue

Question: 12. Muscle tissue cells are contractile, which means they

- Option A. are responsible for the production and secretion of enzymes.
- Option B. are specialized in contraction and relaxation.
- Option C. help in the movement of involuntary organs only.
- Option D. all of the above

Question: 13. In all connective tissues, except which of the following, the cells secrete the fibres of collagen or elastin protein ?

- Option A. Bone
- Option B. Cartilage
- Option C. Areolar connective tissue
- Option D. Fluid connective tissue

Question: 14. Three essential components of most neurons are

- Option A. simple epithelium, extracellular matrix and nerves.
- Option B. axon, dendrites and cell body.
- Option C. nerve cells, synapse and neuroglia.
- Option D. myelin sheath, node of Ranvier and Schwann cells.

Question: 15. The supportive skeletal structures in the human external ears and in the nose tip are examples of

- Option A. ligament
- Option B. areolar tissue
- Option C. bone
- Option D. cartilage

Question: 16. The fibres of which of the following muscles are fusiform and do not show striations

- Option A. Skeletal muscles
- Option B. Cardiac muscles
- Option C. Both (a) and (b)
- Option D. Smooth muscles

Question: 17. Cockroaches are brown or black bodied animals that are included in class _____ of phylum _____.

- Option A. reptilia; annelida
- Option B. insecta; arthropoda
- Option C. insecta; annelida
- Option D. reptilia; arthropoda

Question: 18. Intercalated discs are the communication junctions between the cells of

- Option A. cardiac muscles
- Option B. striped muscles
- Option C. adipose tissue
- Option D. nerve and striated muscles

Question: 19. Neuroglia are

- Option A. excitable cells of neural tissue.
- Option B. supporting and non-excitable cells of neural tissue.
- Option C. two to three times in volume of neural tissue.
- Option D. protective and excitable cells of neural tissue.

Question: 20. Which one of the following pairs of structures distinguishes a nerve cell from other types of cell ?

- Option A. Vacuoles and Fibres
- Option B. Flagellum and Medullary sheath

Option C. Nucleus and Mitochondria

Option D. Cell body and Dendrites

Question: 21. Male cockroach can be identified from the female by the presence of

Option A. long antennae

Option B. wingless body

Option C. elongated abdomen

Option D. anal styles

Question: 22. In cockroach, the testes are present in

Option A. 3, 4, 5 abdominal segments

Option B. 4, 5, 6 abdominal segments

Option C. 5, 6, 7 abdominal segments

Option D. 6, 7, 8 abdominal segments

Question: 23. The mouth parts of cockroach are

Option A. cutting and biting type.

Option B. piercing and sucking type.

Option C. sucking and rasping type.

Option D. sucking and siphoning type.

Question: 24. Phallic organs in cockroach are related to

Option A. male excretory system.

Option B. male reproductive system.

Option C. female excretory system.

Option D. female reproductive system.

Question: 25. Gizzard (proventriculus) in cockroach lies between

Option A. oesophagus and stomach

Option B. crop and mesenteron

Option C. mesenteron and ileum

Option D. oesophagus and crop

Question: 26. Smooth muscles are_____.

Option A. voluntary, branched, uninucleate

Option B. voluntary, multinucleate, cylindrical

Option C. involuntary, cylindrical, multinucleate

Option D. involuntary, spindle shaped, uninucleated, tapering

Question: 27. The frog never drinks water but absorbs it through one of its respiratory organ. Identify the organ.

Option A. Skin

- Option B. Lung
- Option C. Buccal cavity
- Option D. None of the above.

Question: 28. Which statement regarding anal cerci and anal style in cockroach is correct?

- Option A. Anal cerci are absent but anal styles are present in male.
- Option B. Anal cerci are absent and anal styles are present in female.
- Option C. Anal styles are absent and anal cerci are present in male.
- Option D. Anal styles are absent and anal cerci are present in female.

Question: 29. Select the correct statement regarding *Periplaneta americana*

- Option A. There are 16 very long malpighian tubules present at the junctions of midgut and hindgut.
- Option B. Grinding of food is carried out only by the mouth parts.
- Option C. Nervous system is located ventrally and consists of segmentally arranged ganglia joined by a pair of longitudinal connectives.
- Option D. Females bear a pair of short thread like anal styles.

Question: 30. Which of the following statement is incorrect regarding cuboidal epithelium ?

- Option A. It is an epithelial tissue.
- Option B. It is composed of a single layer of cube-like cells.
- Option C. They are found in the walls of blood vessels and air sacs of lungs.
- Option D. Secretion and absorption are the main functions of these tissue.

Answer Sheet

1	D	Squamous epithelium is formed of thin discoidal and polygonal cells that fit like tiles in a floor, so is also called pavement epithelium. It is found in the walls of blood vessels, in the alveoli of lung for exchange of gases, and in Bowmans capsule of nephron for ultra filtration.
2	B	Ciliated columnar epithelium is usually found in the respiratory tract and fallopian tubes.
3	C	Mast cell is a cell found in connective tissue that contains numerous basophilic granules and releases substances such as heparin and histamine in response to injury or inflammation of bodily tissues.
4	D	Basement membrane is a thin extracellular supporting layer that separates a layer of epithelial cells from the underlying lamina propria and is composed of the basal lamina and reticular lamina
5	D	Compound epithelium covers the dry surface of the skin, the moist surface of buccal cavity, pharynx, inner lining of ducts of salivary glands and of pancreatic ducts.
6	C	Gland is an organ in the human or animal body which secretes particular chemical substances for use in the body or for discharge into the surroundings.
		Plasmodesmata are narrow channels that act as intercellular cytoplasmic bridges to

7	D	facilitate communication and transport of materials between plant cells. While adhering, tight and gap junctions are specialized junctions that provide both structural and functional links between the individual cells of animal tissues.
8	D	A tendon is a fibrous connective tissue which attaches muscle to bone. Tendons may also attach muscles to structures such as the eyeball. A tendon serves to move the bone or structure.
9	C	Chondrocytes are the only cells found in healthy cartilage. They produce and maintain the cartilaginous matrix, which consists mainly of collagen and proteoglycans. The chondrocytes lie between the fibres. It is found in the epiglottis (part of the larynx) and the pinnae (the external ear flaps of many mammals including humans).
10	C	Elastic cartilage or yellow cartilage is a type of cartilage present in the outer ear, Eustachian tube and epiglottis. It contains elastic fibre networks and collagen fibres. The principal protein is elastin.
11	C	Tendons, which attach skeletal muscles to bones and ligaments which attach one bone to another are examples of dense regular connective tissues in which collagen fibres are present in rows between many parallel bundles of fibres.
12	B	Muscle tissue plays the vital role of providing movement and heat generation to the organs of the body. Muscle cells are specialized for contractility and electrical conductivity.
13	D	In all connective tissue except blood (a fluid connective tissue), the cells secrete fibres of structural proteins called collagen or elastin.
14	B	A neuron (also known as a neurone or nerve cell) is an electrically excitable cell that processes and transmits information through electrical and chemical signals. These signals between neurons occur via synapses, specialized connections with other cells. A typical neuron possesses a cell body (soma), dendrites, and an axon.
15	D	Cartilage is a vascular and nutrients are diffused through the matrix. Cartilage is a type of connective tissue which is present in human external ears, the nose tip, ribcage joints etc.
16	D	Cells of smooth muscle tissue are spindle shaped and pointed at their ends. Striations are absent due to different arrangement of actin and myosin filaments. Smooth muscle is the earliest form of muscle to evolve.
17	B	Cockroaches are usually brown or black. Cockroaches belong to kingdom animalia, phylum arthropoda, class insecta and Order Blattaria. Some species invade human dwellings and are considered pests. Others are beneficial to the environment as important recyclers of decaying organic material.
18	A	Cardiac muscles are involuntary, cross striated & non-fatigued fibres. Cell junctions fuse the plasma membranes of cardiac muscle cells and make them stick together. Communication junctions (intercalated discs) at some fusion points allow the cells to contract as a unit, i.e., when one cell receives a signal to contract, its neighbours are

		also stimulated to contract.
19	B	Neurons forms the structural and functional unit of nervous tissue. They are excitable cells. While the neuroglial cells constitute the rest of the neural system that protect and support neurons.
20	D	Each neuron has an enlarged portion, the cell body (perikaryon), containing the nucleus and; from the body extend several processes (dendrites) through which impulses enter from their branches.
21	D	Both the sexes have anal cerci which are jointed structures. But in the male, in addition, there is a paired unjointed needlelike anal style which serve to distinguish between the male and the female.
22	B	Testes are paired, 3-4 lobed, situated dorsolaterally just below 4, 5, 6 abdominal segments.
23	A	Grasshoppers, locusts and cockroaches have biting and chewing type of mouth parts. The mouth parts of mosquito is piercing and sucking type; and of house-fly is siphoning type.
24	B	The phallic organs (also called conglobate gland) are related to male reproductive system of cockroach. This organ is present beneath the utricular gland in the 6th segment. It communicates with exterior by a pore close to gonophore.
25	B	Gizzard has an outer layer of thick circular muscles and thick inner forming six highly chitinous plate called teeth. It helps in grinding the food particles.
26	D	Smooth muscle is an involuntary, spindle shaped, uninucleated, tapering and non-striated muscle. Smooth muscle is responsible for the contractility of hollow organs, such as blood vessels, the gastrointestinal tract, the bladder, or the uterus. Its structure differs greatly from that of skeletal muscle, although it can develop isometric force per crosssectional area that is equal to that of skeletal muscle. However, the speed of smooth muscle contraction is only a small fraction of that of skeletal muscle.
27	A	The frog never drinks water but absorbs it through the skin. The skin is always maintained in a moist condition.
28	D	In cockroaches, males bear a pair of short, thread like anal styles which are absent in females. In both sexes, the 10th segment bears a pair of jointed filamentous structures called anal cerci.
29	D	Anal style is a pair of short, thread-like structure present in males only. In both sexes, the 10th segment bears of pair of jointed filamentous structures called anal cerci.
30	C	They are commonly found in ducts of glands and tubular parts of nephrons in kidneys.